NEWS RELEASE
BUREAU OF LABOR STATISTICS
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BLS

Occupational Employment and Wages in Erie – May 2018

Workers in the Erie Metropolitan Statistical Area had an average (mean) hourly wage of $19.94 in May 2018, 20 percent below the nationwide average of $24.98, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that, after testing for statistical significance, 19 of the 22 major occupational groups in the local area were significantly lower than their respective national averages, including arts, design, entertainment, sports, and media; architecture and engineering; and computer and mathematical.

When compared to the nationwide distribution, Erie employment shares were significantly higher in 6 of the 22 occupational groups, including production and personal care and service. Conversely, 9 groups had employment shares significantly below their national representation; these groups included business and financial operations, management, and computer and mathematical. (See table A and box note at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Erie Metropolitan Statistical Area, and measures of statistical significance, May 2018

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Erie		United States	Erie		Percent difference [1]
Total, all occupations	100	100		$24.98	$19.94	*	-20
Management	5.3	3.6	*	58.44	49.69	*	-15
Business and financial operations	5.3	3.4	*	36.98	28.73	*	-22
Computer and mathematical	3.0	1.2	*	44.01	33.42	*	-24
Architecture and engineering	1.8	1.2	*	42.01	31.22	*	-26
Life, physical, and social science	0.8	0.3	*	36.62	28.88	*	-21
Community and social service	1.5	2.0	*	23.69	19.96	*	-16
Legal	0.8	0.3	*	52.25	41.50	*	-21
Education, training, and library	6.1	5.9		27.22	24.81	*	-9
Arts, design, entertainment, sports, and media	1.3	1.2		28.74	20.28	*	-29
Healthcare practitioners and technical	6.0	7.4	*	39.42	34.81		-12
Healthcare support	2.8	3.8	*	15.57	14.44	*	-7
Protective service	2.4	2.0		23.36	23.97		3
Food preparation and serving related	9.2	10.2	*	12.30	11.05	*	-10
Building and grounds cleaning and maintenance	3.1	3.3		14.43	11.97	*	-17
Personal care and service	3.8	6.3	*	13.51	11.99	*	-11
Sales and related	10.0	9.8		20.09	15.68	*	-22
Office and administrative support	15.1	14.6		18.75	16.42	*	-12
Farming, fishing, and forestry	0.3	0.0	*	14.49	19.52	*	35
Construction and extraction	4.1	3.0	*	24.62	23.22	*	-6
Installation, maintenance, and repair	3.9	3.7		23.54	20.86	*	-11

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and the Erie Metropolitan Statistical Area, and measures of statistical significance, May 2018 - Continued

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Erie		United States	Erie		Percent difference [1]
Production	6.3	11.2	*	18.84	17.15	*	-9
Transportation and material moving..................	7.1	5.6	*	18.41	15.75	*	-14

Footnotes:
(1) A positive percent difference measures how much the mean wage in the Erie Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.
* The mean hourly wage or percent share of employment is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Erie had 13,860 jobs in production, accounting for 11.2 percent of local area employment, significantly above the 6.3-percent share nationally. The average hourly wage for this occupational group locally was $17.15, significantly lower than the national average of $18.84.

Some of the larger detailed occupations within the production group included assemblers and fabricators, all other, including team assemblers (1,790) and metal and plastic computer-controlled machine tool operators (1,040). Among the higher-paying jobs in this group were first-line supervisors of production and operating workers ($26.57) and tool and die makers ($23.08). At the lower end of the wage scale were laundry and dry-cleaning workers and production worker helpers, with mean hourly wages of $11.21 and $11.18, respectively. (Detailed data for production occupations are presented in table 1; for a complete listing of detailed occupations go to www.bls.gov/oes/current/oes_21500.htm.)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See table 1.) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Erie area, above-average concentrations of employment were found in several of the occupations within the production group. For instance, metal and plastic extruding and drawing machine setters, operators, and tenders were employed at 3.1 times times the national rate in Erie, and metal and plastic computer-controlled machine tool operators at 8.2 times the U.S. average. On the other hand, laundry and dry-cleaning workers had a location quotient of 1.1 in Erie, meaning that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Pennsylvania Department of Labor and Industry.

Area Changes to the May 2018 Occupational Employment Statistics (OES)

OES continues to publish data for metropolitan and nonmetropolitan areas that cover the full geography of the United States. However, the level of detail available has decreased.

OES no longer publishes data for metropolitan divisions. Data for the 11 large metropolitan areas that contain divisions are now available at the Metropolitan Statistical Area (MSA) or New England City and Town Area (NECTA) level only.

In addition, some smaller nonmetropolitan areas have been combined to form larger nonmetropolitan areas. The May 2018 OES estimates contain data for 134 nonmetropolitan areas, compared with 167 nonmetropolitan areas in the May 2017 estimates.

More information on these changes is available at www.bls.gov/oes/areas_2018.htm.

Implementing the 2018 Standard Occupational Classification (SOC) System

The OES program plans to begin implementing the 2018 Standard Occupational Classification (SOC) system with the May 2019 estimates, to be released by early April of 2020. Because each set of OES estimates is produced by combining three years of survey data, estimates for May 2019 and May 2020 will be based on a combination of survey data collected under the 2010 SOC and data collected under the 2018 SOC, and will use a hybrid of the two classification systems. The May 2021 OES estimates, to be released by early April of 2022, will be the first set of estimates based fully on the 2018 SOC. For more information, please see www.bls.gov/oes/soc_2018.htm.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES data available from BLS include cross-industry occupational employment and wage estimates for the nation; over 580 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-digit, most 4-digit, and selected 5- and 6-digit industry levels; and national estimates by ownership across all industries and for schools and hospitals. OES data are available at www.bls.gov/oes/tables.htm.

The OES survey is a cooperative effort between BLS and State Workforce Agencies (SWAs). BLS funds the survey and provides the procedures and technical support, while the State Workforce Agencies collect most of the data. OES estimates are constructed from a sample of about 1.2 million establishments. Each year, two semiannual panels of approximately 180,000 to 200,000 sampled establishments are contacted, one panel in May and the other in November. Responses are obtained by mail, Internet or other electronic means, email, telephone, or personal visit. The May 2018 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2018, November 2017, May 2017, November 2016, May 2016, and

November 2015. The unweighted sample employment of 83 million across all six semiannual panels represents approximately 58 percent of total national employment. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 71 percent based on establishments and 68 percent based on weighted sampled employment. The sample in the Erie Metropolitan Statistical Area included 1,559 establishments with a response rate of 72 percent. For more information about OES concepts and methodology, go to www.bls.gov/oes/current/oes_tec.htm.

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

The May 2018 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2017 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at www.bls.gov/soc and information about the 2017 NAICS is available at www.bls.gov/bls/naics.htm.

Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Erie, PA Metropolitan Statistical Area** includes Erie County in Pennsylvania.

Additional information

OES data are available on our regional web page at https://www.bls.gov/regions/mid-atlantic. Answers to frequently asked questions about the OES data are available at www.bls.gov/oes/oes_ques.htm. Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at www.bls.gov/oes/current/methods_statement.pdf.

Information in this release will be made available to sensory impaired individuals upon request – Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Erie Metropolitan Statistical Area, May 2018

Occupation [1]	Employment [2]		Mean wage	
	Level	Location quotient [3]	Hourly	Annual [4]
Production occupations	13,860	1.8	$17.15	$35,670
First-line supervisors of production and operating workers.	950	1.8	26.57	55,270
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers.........................	370	1.6	14.19	29,520
Structural metal fabricators and fitters.............................	80	1.2	17.87	37,160
Assemblers and fabricators, all other, including team assemblers	1,790	1.5	14.23	29,590
Bakers	230	1.5	13.21	27,480
Butchers and meat cutters	80	0.7	16.79	34,920
Food batchmakers..	390	2.8	14.38	29,900
Computer-controlled machine tool operators, metal and plastic	1,040	8.2	17.02	35,390
Computer numerically controlled machine tool programmers, metal and plastic............	70	3.5	21.99	45,740
Extruding and drawing machine setters, operators, and tenders, metal and plastic	200	3.1	16.58	34,480
Forging machine setters, operators, and tenders, metal and plastic	40	2.9	21.97	45,700
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	370	2.3	13.43	27,930
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	240	3.8	15.36	31,950
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	(5)	(5)	19.62	40,810
Machinists	720	2.2	19.32	40,190
Foundry mold and coremakers..	40	3.1	14.97	31,150
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	490	3.5	14.76	30,710
Multiple machine tool setters, operators, and tenders, metal and plastic	480	4.2	16.10	33,480
Tool and die makers	280	4.5	23.08	48,010
Welders, cutters, solderers, and brazers...........................	(5)	(5)	18.07	37,580
Plating and coating machine setters, operators, and tenders, metal and plastic	(5)	(5)	17.25	35,890
Printing press operators	190	1.3	12.72	26,460
Print binding and finishing workers..................................	40	1.0	12.49	25,970
Laundry and dry-cleaning workers	200	1.1	11.21	23,320
Pressers, textile, garment, and related materials..............	40	1.2	9.82	20,430
Cabinetmakers and bench carpenters	60	0.7	17.39	36,170
Woodworking machine setters, operators, and tenders, except sawing........................	100	1.4	16.31	33,930
Stationary engineers and boiler operators	(5)	(5)	31.89	66,330
Water and wastewater treatment plant and system operators	70	0.7	24.76	51,510
Chemical equipment operators and tenders	180	2.6	22.34	46,470
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders..........................	40	0.8	14.99	31,170
Grinding and polishing workers, hand...............................	40	1.7	10.73	22,310
Mixing and blending machine setters, operators, and tenders	160	1.4	20.39	42,410
Cutting and slicing machine setters, operators, and tenders	40	0.8	12.72	26,450
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	100	1.6	18.29	38,050
Inspectors, testers, sorters, samplers, and weighers.........	660	1.4	15.66	32,560
Packaging and filling machine operators and tenders	430	1.3	13.77	28,640
Coating, painting, and spraying machine setters, operators, and tenders	190	2.5	16.11	33,510
Molders, shapers, and casters, except metal and plastic ..	50	1.5	9.23	19,190
Helpers--production workers...	510	1.7	11.18	23,250

Note: See footnotes at end of table.

Footnotes:

(1) For a complete listing of all detailed occupations in the Erie Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_21500.htm.

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimates not released.